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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/902,810	07/10/2001	Anders Hejlsberg	MS1-865US	6062

22801 7590 08/16/2004  
LEE & HAYES PLLC  
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SPOKANE, WA 99201

EXAMINER

RAMPURIA, SATISH

ART UNIT PAPER NUMBER

2124

DATE MAILED: 08/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/902,810

Applicant(s)

HEJLSBERG ET AL.

Examiner

Satish S. Rampuria

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 1/6/04, 8/26/03, 5/9/03, 2/26/04
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

***DETAILED ACTION***

1. This action is in response to the application filed on 07/10/2001.
2. Claims 1-27 are pending.

***Priority***

3. An application in which the benefits of an earlier application are desired must contain a specific reference to the prior application(s) in the first sentence of the specification of in an application data sheet (37 CFR 1.78(a)(2) and (a)(5)). The specific reference to any prior nonprovisional application must include the relationship (i.e., continuation, divisional, or continuation-in-part) between the applications except when the reference is to a prior application of a CPA assigned the same application number.
4. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copies have been received on January 17, 2002.

***Specification***

5. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. E.g., page 22, lines 16-25. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.
6. The disclosure is objected to because of the following informalities:  
  
On page 3, line 16 “ushered” appears to be “unshared”.  
  
Appropriate correction is required

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***Information Disclosure Statement***

7. An initialed and dated copy of Applicant's IDS form 1449, Paper No. attached to the instant Office action.

***Claim Rejections - 35 USC § 102***

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.  
(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 4-12 is rejected under 35 U.S.C. 102(e) as being anticipated by .NET Framework Essentials, published in 2001 by Lam (hereinafter called Lam).

**Per claim 4:**

Lam discloses:

- An XmlReader class of an application program interface, embodied on one or more computer readable media that enables non-cached forward only access to XML data (page 4 of 8, "section 5.5.2.5 XmlReader-The XmlReader object... is a fast, nocached, forward-only way of accessing streamed XML data"), the XmlReader class comprising:
- an XmlReader constructor that enables initialization of a new instance of the XmlReader class (page 5 of 8, "section 5.5.2.5 XmlReader-... XMLTextReader

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- object with the stream of data from the string... is loop through and perform a Read() operation until there is nothing else to read”); and
- a Read method that enables reading of nodes of the XML data via the XmlReader class instance (page 5 of 8, “section 5.5.2.5 XmlReader-... While reading, only when we come across a node of type XmlElement and a node named Order do we start to process the order”).

**Per claim 5:**

Lam discloses:

- a BaseURI property that identifies a base URI of a current node of the XML data (page 2 of 3, “section 4.2.1 Distributed Hello Server-...Once created channel object... register... object... RemotingConfiguration... calling RegisterWellKnownServiceType() method... pass in the class name, a URI, and a object-activation mode... URI is important... key element... client application will use to refer specifically to this registered object”); and
- a NodeType property that identifies the type of the current node (page 2 of 8, “section 5.5.2.1 XmlNode and its derivatives-... XmlNode is a base class that represents a single node in the XML document”)

**Per claim 6:**

Lam discloses:

- An XPathNavigator class of an application program interface, embodied on one or more computer readable media, that enables read-only random access to a data

- store (page 1 of 8, “section 5.5.1 Xml parser- ... parser... reads the data, notifying the application of the tag or text”), the XPathNavigator class comprising:
- an XPathNavigator constructor that enables initialization of a new instance of the XPathNavigator class (page 1 of 8, “section 5.5.1 Xml parser- ... parser... reads the data, notifying the application of the tag or text”);
  - a MoveToFirst method that enables moving to a first sibling of a current node of XML data (page 3 of 8, “section 5.5.2.1 XmlNode and its derivatives-... XmlNode... supports... properties... aid in navigation... XML document... FirstChild”);
  - a MoveToNext method that enables moving to a next sibling of the current node (page 3 of 8, “section 5.5.2.1 XmlNode and its derivatives-... XmlNode... supports... properties... aid in navigation... XML document... NextSibling”);
  - a MoveToPrevious method that enables moving to a previous sibling of the current node (page 3 of 8, “section 5.5.2.1 XmlNode and its derivatives-... XmlNode... supports... properties... aid in navigation... XML document... PreviousSibling”);
  - a MoveToFirstChild method that enables moving to a first child of the current node (page 3 of 8, “section 5.5.2.1 XmlNode and its derivatives-... XmlNode... supports... properties... aid in navigation... XML document... FirstChild”);
  - a MoveToParent method that enables moving to a parent of the current node (page 3 of 8, “section 5.5.2.1 XmlNode and its derivatives-... XmlNode... supports... properties... aid in navigation... XML document... ParenNode”); and

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- a NodeType property that enables obtaining the type of the node that is moved to (page 3 of 8, “section 5.5.2.1 XmlNode and its derivatives-... XmlNode... supports... properties... aid in navigation... XML document... use the ChildNode property to navigate down from the root of the tree”).

**Per claim 7:**

Lam discloses:

- An XsltTransform class of an application program interface, embodied on one or more computer readable media, that enables transforming of XML data using an XSLT stylesheet (page 6 of 8, “section 5.5.2.7 XsltTransform-XsltTransform converts XML from one format to another... XsltTransform xslt = new XsltTransform()”), the XsltTransform class comprising:
  - an XsltTransform constructor that enables initialization of a new instance of the XsltTransform class (page 6 of 8, “section 5.5.2.7 XsltTransform-... XsltTransform xslt = new XsltTransform( )”);
  - a Load method that enables loading of the XSLT stylesheet (page 6 of 8, “section 5.5.2.7 XsltTransform-... xslt.Load("XSLTemplate.xml"); and
  - a Transform method that enables transforming of the specified XML data using the loaded XSLT stylesheet and outputs the results (page 6 of 8, “section 5.5.2.7 XsltTransform-... “xslt.Transform(xDoc, null, writer)”).

**Per claim 8:**

Lam discloses:



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- A set of XmlSchema classes of an application program interface, embodied on one or more computer readable media, that enable constructing and editing of schemas (page 3 of 9, “section 5.3.1.2 XML and Tables Sets-... WriteXMLSchema() dumps on the schema of the tables, including all table sand relationships between tables”), the set of XmlSchema classes comprising:
  - a Schema class that contains a definition of a schema (page 1 of 1, “section 1.1-... “a class can be expressed as an XML Schema Definition (XSD)”);
  - a SchemaObject class that enables creating of an empty schema (page 1 of 1, “section 1.1-... “an object can be converted to and from an XML buffer; a method can be specified using an XML format called Web Services Description Language (WSDL);”); and
  - a SchemaCollection class that contains a cache of defined XML Schema Definition language (XSD) and XML-Data Reduced Language (XDR) schemas (page 5 of 5, “section 2.3.4 Interoperability Support-... The XML schema definition tool can also take a .NET assembly and generate an XML schema definition (XSD) that represents the types within the .NET assembly”).

**Per claim 9:**

Lam discloses:

- An XmlResolver class of an application program interface, embodied on one or more computer readable media, that enables resolving of external XML resources named by a Uniform Resource Identifier (URI) (page 2 of 3, “section 4.2.1 Distributed Hello Server-... Once created channel object... supports channel

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registration and object resolution... register... object... RemotingConfiguration... calling RegisterWellKnownServiceType() method... pass in the class name, a URI, and a object-activation mode... URI is important... key element... client application will use to refer specifically to this registered object”), the XmlResolver class comprising:

- a ResolveURI method that enables resolving the absolute URI from a base URI and a relative URI (page 2 of 3, “section 4.2.1 Distributed Hello Server-...Once created channel object... supports channel registration and object resolution”); and
- a GetEntity method that enables mapping of the resolved URI to an object containing identified resource (page 2 of 3, “section 4.2.2 Remote Hello Client-... invoke remote method... first activate the remote object and obtain associated proxy on the client side...call GetObject() method of the activator class”).

**Per claim 10:**

Lam discloses:

- An XmlDataDocument class of an application program interface, embodied on one or more computer readable media, that enables structured data to be stored, retrieved, and manipulated through a relational dataset (page 7 of 8, “section 5.5.2.8 XmlDataDocument-one of the most important... DataSet with XML... manipulate in memory”), the XmlDataDocument class comprising:
- a DataSet property that enables obtaining of a dataset that provides a relational representation of the data in a document (page 7 of 8, “section 5.5.2.8

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XmlDataDocument-... once we have a DataSet, we can persist the data inside the DataSet into an XML string or file”);

- a Load method that enables loading of the document using a specified data source and synchronizing the dataset with the loaded data (page 7 of 8, “section 5.5.2.8 XmlDataDocument-... The schema of the DataSet can be loaded and saved as XML Schema Definition (XSD)... XmlDataDocument can be associated with DataSet”).

**Per claim 11:**

Lam discloses:

- An XmlWriter class of an application program interface, embodied on one or more computer readable media, that enables a non-cached forward only way of generating streams and files containing XML data (page 5 of 8, “section 5.5.2.6 XmlWriter-TheXMLWriter object... is a fast, non cached way of writing streamed XML data”), the XmlWriter class comprising:
- an XmlWriter constructor that enables initialization of a new instance of the XmlWriter class (page 5 of 8, “section 5.5.2.6 XmlWriter-... XmlWriter supports namespaces by providing a number of overloaded functions that take a namespace to associate with the element”); and
- an WriteState property that enables obtaining of the state of an instance of the XmlWriter class (page 5 of 8, “section 5.5.2.6 XmlWriter-... writer.WriteStartElement("ElementName", "myns")”); and

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- a plurality of Write methods that enable writing XML data via the instance of the XmlWriter class (page 5 of 8, “section 5.5.2.6 XmlWriter-... “XmlTextWriter writer... writer.Close( )”).

10. Claim 12 is rejected under 35 U.S.C. 102(e) as being anticipated by US

Publication No. 2002/0169679 to Neumayer (hereinafter called Neumayer).

**Per claim 12:**

Neumayer discloses:

- An XmlValidatingReader class of an application program interface, embodied on one or more computer readable media, that enables DTD, XDR and XSD schema validation (page 2 and 3, paragraph 33 “the incoming data is validated... accomplished through a class called XMLValidator, which is a helper class to check if the XML data is valid”), the XmlValidatingReader class comprising:
- a ValidationType property that enables obtaining an indication of what type of validation to perform on a document (page 3 and 4, paragraph 33 “A method of validateXML can be used to check the given XML against the schema”);
- a Read method that enables reading of nodes of the document so that validation of the document can be performed (page 3 and 4, paragraph 34 “an MLProcessor class, which extracts information from the XML and creates the rule object”).

Substantially as claimed.

***Claim Rejections - 35 USC § 103***

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. Claims 1, 16, 19, 22, and 25 rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 6,418,448 to Sarkar (hereinafter called Sarkar) in view of US Patent No. 6,209,124 to Vermeire et al. (hereinafter called Vermeire).

**Per claims 1, 16, 19, 22, and 25:**

Sarkar discloses:

- A software architecture for a distributed computing system comprising: an application configured to handle requests submitted by remote devices over a network (col. 5, lines 62-63 “transactions could be triggered through thin client windows communicating persistently with remote databases”); and.

Sarkar does not explicitly disclose an application program interface to present functions used by the application to access network and computing resources of the distributed computing system, wherein the application program interface comprises a set of classes that make available standards-based support for processing XML documents.

However, Vermeire discloses in an analogous computer system an application program interface to present functions used by the application to access network and computing resources of the distributed computing system (col. 10, lines 54-56 “the operator interface and the application model which allows for actual processing of the particular language source code”), wherein the application program interface comprises

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a set of classes that make available standards-based support for processing XML documents (col. 20, lines 8-10 “invokes the parser to convert the source code into a tree form, provide editing for the tree and generating the metadata XML using the XML Writer class”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of using application program interface to generate the code as taught by Vermeire into the method of receiving the data via remote devices as taught by Sarkar. The modification would be obvious because of one of ordinary skill in the art would be motivated to use an application program interface to provide the use of the same data that is being used in the conventional system as suggested by Vermeire (col. 4, lines 35-67).

13. Claims 2, 17, 20, 23, and 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Sarkar in view of .NET Framework Essentials, published in 2001 by Lam (hereinafter called Lam).

**Per claims 2, 17, 20, 23, and 26:**

The rejection of claim 1 is incorporated, and further, Sarkar does not explicitly disclose an XmlReader class that enables non-cached forward only access to XML data; an XPathNavigator class that enables read-only random access to a data store; an XslTransform class that enables transforming of XML data using an XSLT stylesheet; a plurality of Xml Schema classes that enable constructing and editing of schemas; an XmlResolver class that enables resolving of external XML resources named by a Uniform Resource Identifier (URI); an XmlDataDocument class that enables structured

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data to be stored, retrieved, and manipulated through a relational dataset; and an XmlWriter class that enables a non-cached forward only way of generating streams and files containing XML data.

However, Lam discloses in an analogous computer system an XmlReader class that enables non-cached forward only access to XML data (page 4 of 8, “section 5.5.2.5 XmlReader-The XmlReader object... is a fast, nocached, forward-only way of accessing streamed XML data”); an XPathNavigator class that enables read-only random access to a data store (page 1 of 8, “section 5.5.1 Xml parser- ... parser... reads the data, notifying the application of the tag or text”); an XslTransform class that enables transforming of XML data using an XSLT stylesheet (page 6 of 8, “section 5.5.2.7 XslTransform-XslTransform converts XML from one format to another... XslTransform xslt = new XslTransform()”); a plurality of Xml Schema classes that enable constructing and editing of schemas (page 3 of 9, “section 5.3.1.2 XML and Tables Sets-... WriteXMLSchema() dumps on the schema of the tables, including all table sand relationships between tables”); an XmlResolver class that enables resolving of external XML resources named by a Uniform Resource Identifier (URI) (page 2 of 3, “section 4.2.1 Distributed Hello Server-...Once created channel object... register... object... RemotingConfiguration... calling RegisterWellKnownServiceType() method... pass in the class name, a URI, and a object-activation mode... URI is important... key element... client application will use to refer specifically to this registered object”); XmlDataDocument class that enables structured data to be stored, retrieved, and manipulated through a relational dataset (page 7of 8, “section 5.5.2.8 XmlDataDocument-one of the most important... DataSet with XML... manipulate in memory”); and an XmlWriter class that enables a non-cached

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forward only way of generating streams and files containing XML data (page 5 of 8, “section 5.5.2.6 XmlWriter-TheXMLWriter object... is a fast, non cached way of writing streamed XML data”).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the classes as described above as taught by Lam into the system of creating the XML document as taught by Sarkar. The modification would be obvious because of one of ordinary skill in the art would be motivated to use the classes as described above to build high performance, scalable solutions for e-commerce, also, allows the applications to run on different platform through the use of XML as suggested by Lam (page 1 of 1, “section 5.6 Summary).

14. Claim 3, 13-15, 18, 21, 24, and 27 rejected under 35 U.S.C. 103(a) as being unpatentable over Sarkar, Lam in view of US Publication No. 2002/0169679 to Neumayer (hereinafter called Neumayer).

**Per claims 3, 13-15, 18, 21, 24, and 27:**

The rejection of claim 2 is incorporated, and further, neither Sarkar nor Lam explicitly disclose an XmlValidatingReader class that enables DTD, XDR and XSD schema validation.

However, Neumayer discloses in an analogous computer system an XmlValidatingReader class that enables DTD, XDR and XSD schema validation (page 2 and 3, paragraph 33 “the incoming data is validated... accomplished through a class called XMLValidator, which is a helper class to check if the XML data is valid”).



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Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the method of validating XML data via a XML validator as taught by Neumayer into the method of creating a XML document via several XML classes as taught in combination system by Sarkar and Lam. The modification would be obvious because of one of ordinary skill in the art would be motivated to validate the XML to provide secure transactions in business as suggested by Neumayer (page 1, paragraph 4).

### ***Conclusion***

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patent is cited to further show the state of the art with respect to web base software development.

US Publication No. 20030074206 to Hoffman et al.

US Publication No. 20030051236 to Pace et al.

US Patent No. 6256678 to Traughber et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Satish S. Rampuria whose telephone number is 703-305-8891. The examiner can normally be reached on 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703) 305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Satish S. Rampuria  
Patent Examiner  
Art Unit 2124  
08/09/2004

*Kakali Chaki*  
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